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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,128	11/14/2001	Opher D. Kahn	042390.P12371	5211

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EXAMINER

MCLEAN MAYO, KIMBERLY N

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 11/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/991,128	Applicant(s) KAHN ET AL.	
	Examiner Kimberly N. McLean-Mayo	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The enclosed detailed action is in response to the Amendment submitted on September 3, 2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-7, 9-10, 12-21, 22-28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Schell et al. (USPN: 6,314,520).

Regarding claims 1, 3 and 5, Schell discloses a circuit [memory controller] comprising a first control register (Figure 3, Reference 96 within Reference 14 in Figure 1; RCV mask and offset register) to be loadable after the circuit is reset (C 5, L 2-5); a first plurality of control registers to be loadable during an initialization process after the circuit is reset and to be unloadable until the circuit is reset again (Figure 3, References 68, 90 and 92 within Reference 14 in Figure 1; C 4, L 17-26, L 59-67; C 5, L 1-2; C 6, L 15-18); and a first switch unit (software/internal logic within Reference 20 in Figure 3 within Reference 14 in Figure 1 which controls outputting data to comparators 74 and 100 in Figure 3 within Reference 14 in Figure 1) coupled to the first control register and the first plurality of control registers, wherein the first switch unit outputs data [to

Reference 100 in Figure 3] stored by one control register of the first plurality of control registers as a function of the data loaded in the first control register (C 5, L 5-25).

Regarding claims 4, 13-14 and 19, Schell discloses the software control causing the first register to be loaded with different data in response to a change in the circuit's operational mode, which is user-selectable via the network, wherein the network is the user (an operation mode change occurs when a different packet is sent to Reference 96 in Figure 3)(C 5, L 2-5).

Regarding claims 6-7, 15-16 and 20-21, Schell discloses the first plurality of control registers loaded by a BIOS during an initialization process after the circuit is reset (C 4, L 17-26, L 59-67; C 5, L 1-2 - initialization intrinsically occurs after a reset) and locked by the BIOS during the initialization process after the circuit is reset (C 5, L 52-58).

Regarding claim 9, Schell discloses a second control register (Figure 3, Reference 96 within Reference 15 in Figure 1; RCV mask and offset register) to be loadable after the circuit is reset (C 6, L 15-18 – initialization intrinsically occurs after a reset); a second plurality of control registers to be loadable during an initialization process after the circuit is reset and to be unloadable until the circuit is reset again (Figure 3, References 68, 90 and 92 within Reference 15 in Figure 1; C 4, L 17-26, L 59-67; C 5, L 1-2); and a second switch unit (software/internal logic within Reference 20 in Figure 3 with Reference 15 in Figure 1 which controls outputting data to comparators 74 and 100 in Figure 3 within Reference 15 in Figure 1) coupled to the second control register and the second plurality of control registers, wherein the second switch

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unit outputs data [to Reference 100 in Figure 3] stored by one control register of the second plurality of control registers as a function of the data loaded in the second control register (C 5, L 5-25).

Regarding claims 10, 12 and 17-18, Schell discloses means for storing first data (data stored in Reference 96 in Figure 3) and second data, the second data including a plurality of portions (portions comprised of data stored in References 68, 90 and 92 in Figure 3) (C 5, L 2-5, C 4, L 17-26, L 59-67; C 5, L 1-2; C 6, L 15-18) wherein after the circuit is reset and initialized the first data is changeable and the second data is not changeable (the second data is stored in locked registers [refer to C 5, L 52-58] and the first data is not stored in locked registers and thus there is no disclosed means for preventing a write to the first data and thus the first data is changeable); and means (software/internal logic within Reference 20 in Figure 3 which controls outputting data to comparators 74 and 100 in Figure 3) for selecting one portion of the plurality of portions in response to the first data, wherein the selected portion is provided to another unit of the circuit (Reference 100 in Figure 3) (C 5, L 5-25).

Regarding claims 22-27, Schell discloses loading a plurality of controls registers of a circuit, the plurality of control registers including a plurality of protected registers (Figure 3, References 68, 90 and 92) and unprotected registers (Figure 3, References 84, 85 and RCV mask and offset register within Reference 96 in Figure 3) (C 5, L 2-5, C 4, L 17-26, L 59-67; C 5, L 1-2; C 6, L 15-18); locking the plurality of protected control registers (C 5, L 52-58); selecting a locked control register of the plurality of control registers as a function of data stored in an unprotected

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control register of the plurality of control registers and outputting [to Reference 100 in Figure 3] data stored by the selected locked control register (C 5, L 5-25); deselecting the locked control register and selecting another locked control register of the plurality of protected control registers (when the software/internal logic within Reference 20 in Figure 3 which controls outputting data to comparators 74 and 100 in Figure 3, switches to outputting data to Reference 74, the register output to Reference 100 is effectively deselected)(C 4, L 30-46).

Regarding claims 28 and 30, Schell discloses a processor (Figure 2, Reference 26); a memory (memory within Reference 12 in Figure 1); and a memory controller (Reference 20 in Figure 2) coupled to the processor and the memory [via Reference 18], the memory controller comprising a first control register (Figure 3, Reference 96 in Figure 3; RCV mask and offset register) to be loadable after the circuit is reset (C 5, L 2-5); a first plurality of control registers to be loadable during an initialization process after the circuit is reset and to be unloadable until the circuit is reset again (Figure 3, References 68, 90 and 92; C 4, L 17-26, L 59-67; C 5, L 1-2; C 6, L 15-18); and a first switch unit (software/internal logic within Reference 20 in Figure 3 which controls outputting data to comparators 74 and 100 in Figure 3) coupled to the first control register and the first plurality of control registers, wherein the first switch unit outputs data [to Reference 100 in Figure 3] stored by one control register of the first plurality of control registers as a function of the data loaded in the first control register (C 5, L 5-25).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 11 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schell (USPN: 6,314,520) in view of Circello (PGPUB: US 2003/0061461).

Schell discloses the limitations cited above in claims 1, 10 and 28, however, Schell does not disclose the switch unit comprising a multiplexer having input ports coupled to receive output from the first plurality of control registers and having a control port coupled to receive output from the first control register. Circello teaches the concept of a switch unit comprising a multiplexer (Figure 2, Reference 68) having input ports coupled to receive output from the first plurality of control registers (Figure 2, References 70-72) and having a control port coupled to receive output from the first control register (the control port of Reference 68 receives an address output {refer to 2[19:18] coupled to Reference 68} from an address register within Reference 28 in Figure 1, which outputs an address to Reference 40 in Figure 2). These features taught by Circello provide flexibility to the system by allowing the system to operate with different addressing modes which are implemented using the above features. Thus, it would have been obvious to one of ordinary skill in the art to use Circello's teachings with the teachings of Schell for the desirable purpose of flexibility.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schell (USPN: 6,314,520) in view of Rapp (PGPUB: US 2001/0014036).

Schell discloses the limitations cited above, however, Schell does not disclose the plurality of control registers including a lock bit to set by the BIOS to lock the plurality of control registers during the initialization process after the circuit is reset. However, Rapp teaches the concept of including a plurality of memory locations [register storage units] with a lock bit lock the corresponding memory location (Page 1, Section [0004]). This feature taught by Rapp provides a simple and efficient means for locking storage locations. Schell does not explicitly disclose how the lock functionality is the system is performed, however, one of ordinary skill in the art would have recognized the simple design and efficiency afforded by the Rapp's teachings and accordingly would have been motivated to use Rapp's teachings with Schell's system for the desirable purpose of simpler design and efficiency.

Response to Arguments

7. Applicant's arguments filed September 3, 2003 have been fully considered but they are not persuasive.

Regarding Applicant's argument with respect to Schell, the Examiner disagrees. The terminology as a function of can be interpreted to mean "any of a group of related actions contributing to a larger action. In this case, the data is output to the comparator as part of the group of related actions including loading data in the first control register which both contribute to the larger action of the comparator.

Regarding Applicant's argument with respect to Circello, the rejection states that Circello teaches the concept of a switch unit comprising a multiplexer (Figure 2, Reference 68) having input ports coupled to receive output from the first plurality of control registers (Figure 2, References 70-72) and **having a control port coupled to receive output from the first control register (the control port of Reference 68 receives an address output {refer to 2[19:18] coupled to Reference 68} from an address register [first control register] within Reference 28 in Figure 1, which outputs an address to Reference 40 in Figure 2).**

Applicant's argument that Circello fails to disclose that the registers 70-72 are to be unloadable until the circuit is reset again is incommensurate with the claims. This feature is not cited in the claims.

Additionally, the Applicant argues that Circello and Rapp do not teach "...wherein the first switch unit to output data...". Schell teaches this feature and Circello and Rapp are cited for teaching the limitations listed above in which Schell does not teach.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

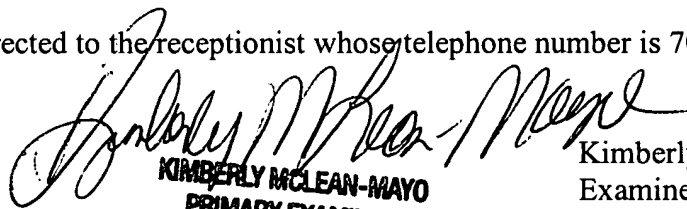
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 703-308-9592. The examiner can normally be reached on M-F (9:00 - 6:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7329 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2100.



KIMBERLY MCLEAN-MAYO
PRIMARY EXAMINER

Kimberly N. McLean-Mayo
Examiner
Art Unit 2187

KNM

November 14, 2003